Instructions-Parts

Part No. 15V826
Gun Flush Box Kit

312784D
ENG

Kit includes parts to install a Graco Gun Flush Box in a ProMix® 2KS or ProMix® 2KE Proportioning System. For professional use only.

Bare Gun Flush Box is approved for use in explosive atmospheres. See manual 309227.

100 psi (0.7 MPa, 7 bar) Maximum Air Inlet Pressure

Important Safety Instructions
Read all warnings and instructions in this manual.
Save these instructions.

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Related Manuals

See the following manuals for additional information on the ProMix 2KS, ProMix 2KE, and Gun Flush Box Kits.

Manual	Description
309227	Bare Gun Flush Box
312775	ProMix 2KS Manual System Installation
312776	ProMix 2KS Manual System Operation
312777	ProMix 2KS Manual System Repair-Parts
312778	ProMix 2KS Automatic System Installation
312779	ProMix 2KS Automatic System Operation
312780	ProMix 2KS Automatic System Repair-Parts
3A0868	ProMix 2KE Pump-Based Operation
3A0869	ProMix 2KE Meter-Based Operation
3A0870	ProMix 2KE Repair-Parts

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

⚠ WARNING

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail.
- If there is static sparking or you feel a shock, **stop operation immediately.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.

PRESSURIZED EQUIPMENT HAZARD

Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

⚠ WARNING

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDS's to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
- Always wear impervious gloves when spraying or cleaning equipment.

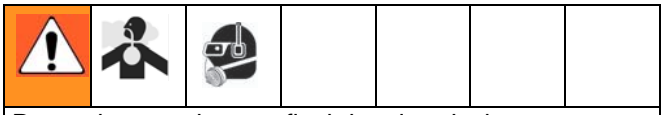
PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:

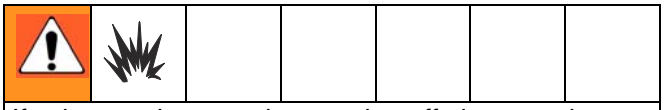
- Protective eyewear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection

Installation

See FIG. 2 for a typical installation of the gun flush box kit. FIG. 2 is only a guide. Contact your Graco distributor for assistance in designing a system to meet your application needs.



Do not bypass the gun flush box interlock sensors. They prevent the gun flush box from operating unless the gun is in position and the gun flush box door is locked.



If using an electrostatic gun, shut off electrostatics before flushing. Follow the warnings in your electrostatic gun manual.

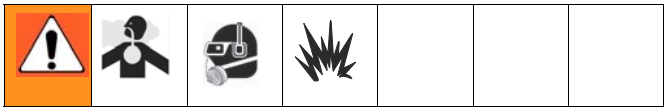
Location

Locate and mount the gun flush box as explained in the Gun Flush Box manual 309227.

Intrinsically Safe Installation

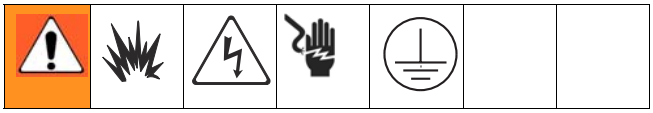
Follow instructions in your proportioner manual.

Ventilation



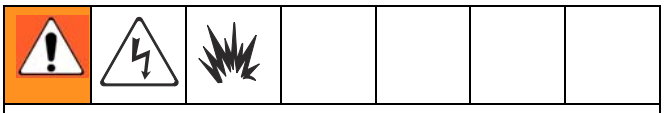
Electrically interlock the spray booth air supply (J) with ventilators, using a ventilation interlock valve (K), to prevent the gun flush box from operating when ventilating fans are not operating. See FIG. 2, page 6. Check and follow all applicable air exhaust velocity codes for your area and type of installation.

Grounding



Ground the gun flush box as explained in the Gun Flush Box manual 309227.

Before Installing



- To avoid electric shock, turn off EasyKey power before installing.
- All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.
- Do not substitute system components as this may impair intrinsic safety.
- Read **Warnings**, page 3.

NOTICE

To avoid damaging circuit board when servicing, wear Part No. 112190 grounding strap on wrist and ground appropriately.

1. Close main air shutoff valve on air supply line and on proportioner.
2. Shut off proportioner power. FIG. 1.
3. Loosen the 4 screws and remove the Fluid Station cover.

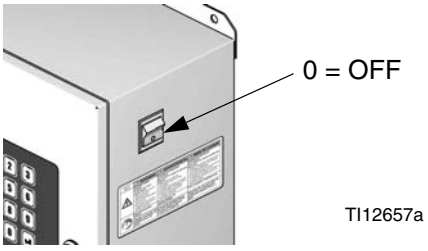
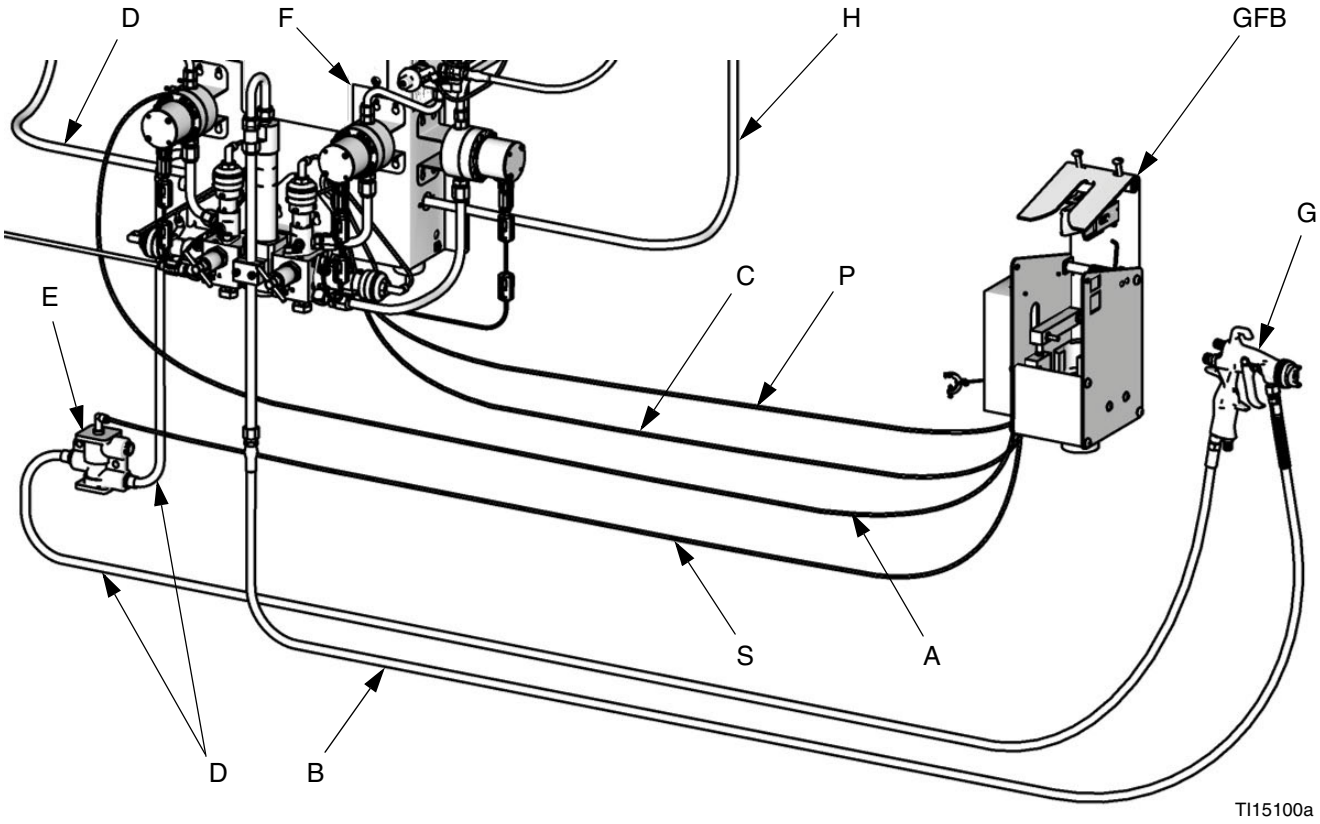


FIG. 1: Power Off (ProMix 2KS Shown)

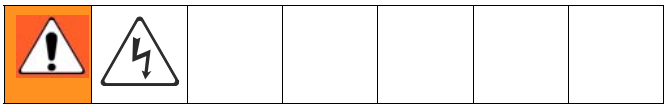


Key:

GFB	Gun Flush Box (see FIG. 11 for detail of air line connection fittings A, C, P, S)
A	Air Line from GFB to Pressure Switch Input
B	Fluid Supply to Gun
C	Air Line from GFB to GFB Solenoid Output
D	Atomizing Air Supply
E	Gun Air Safety Shutoff Valve (see page 14)
F	Fluid Station
G	Spray Gun
H	Main Air Supply Line
P	Air Line from GFB to Fluid Station Main Air Manifold
S	Air Line from GFB to Gun Air Safety Shutoff Valve Pilot Port

FIG. 2: Typical Installation (ProMix 2KS System Shown)

Install the Air Flow Switch

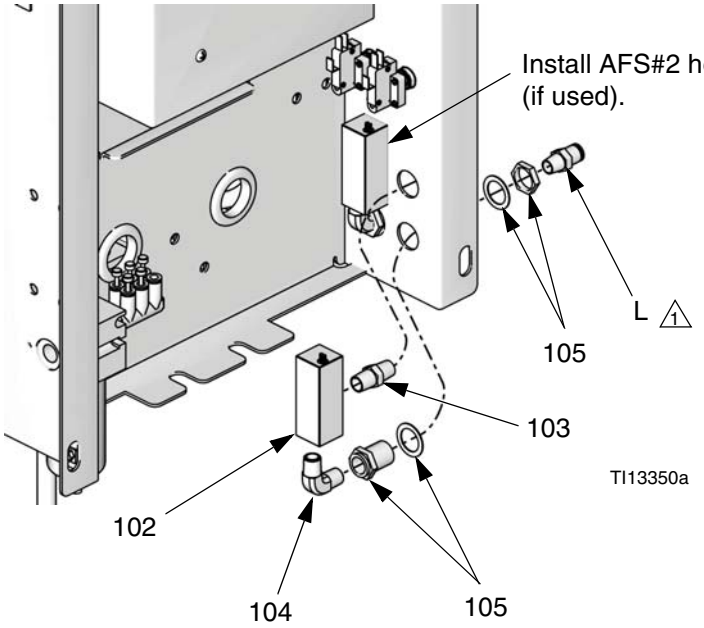


NOTE: Each gun flush box includes one air flow switch (AFS). Install the air flow switch as shown in FIG. 3. If you are using a second gun flush box, install its air flow switch next to the first switch, as shown.

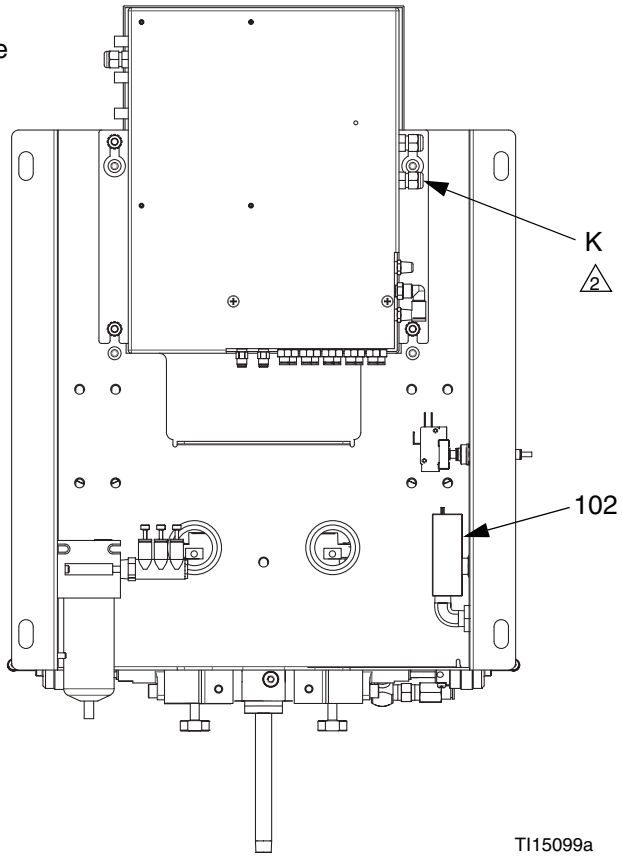
1. Follow **Before Installing**, page 5.
2. See FIG. 3 for the ProMix 2KS or FIG. 4 for the ProMix 2KE. Position the air flow switch (102) as shown. Install the nipple (103) and elbow (104). Assemble the bulkhead fitting (105) as shown, to secure the switch to the side of the panel.
3. Route the air flow switch wires through the designated strain relief (K). Connect AFS#1 wires to pins 1 and 2. *ProMix 2KS only:* Connect AFS#2 wires (if used) to pins 3 and 4.

4. See FIG. 2. Connect a 1/4 npt atomizing air line (D) from the AFS outlet nipple (103) to the air inlet port of the air safety shutoff valve (E, also see FIG. 10). Connect another length of atomizing air line (D) from the safety valve outlet port to the gun (G) air inlet.

5. See FIG. 3 for the ProMix 2KS or FIG. 4 for the ProMix 2KE. Install an appropriate air inlet fitting (L) into the bulkhead fitting (105). The air inlet fitting must be 1/4 npt(m) on the bulkhead end. The other end must be sized to mate with your main air supply line.



Install Air Flow Switch on Back of Fluid Station Panel



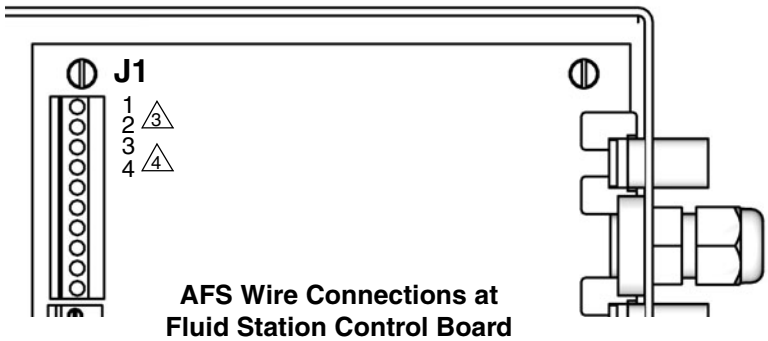
Back View of Fluid Station Panel

1 User supplied air inlet fitting (L) must be 1/4 npt(m) to mate with bulkhead fitting (105).

2 Route AFS wires through this strain relief (K) to Fluid Station Control Board.

3 Connect AFS#1 wires to J1 pins 1 and 2 on Fluid Station Control Board.

4 Connect AFS#2 wires to J1 pins 3 and 4 on Fluid Station Control Board.



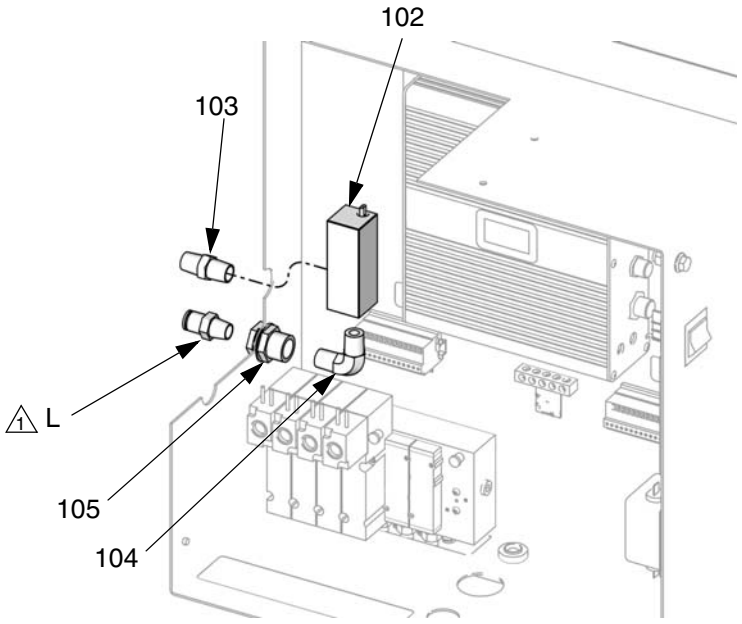
AFS Wire Connections at Fluid Station Control Board

FIG. 3: Installing the Air Flow Switch on a ProMix 2KS

⚠1 User supplied air inlet fitting (L) must be 1/4 npt(m) to mate with bulkhead fitting (105).

⚠2 Connect AFS#1 wires to pins 1 and 2.

⚠3 Connect AFS#2 wires to pins 7 and 8.



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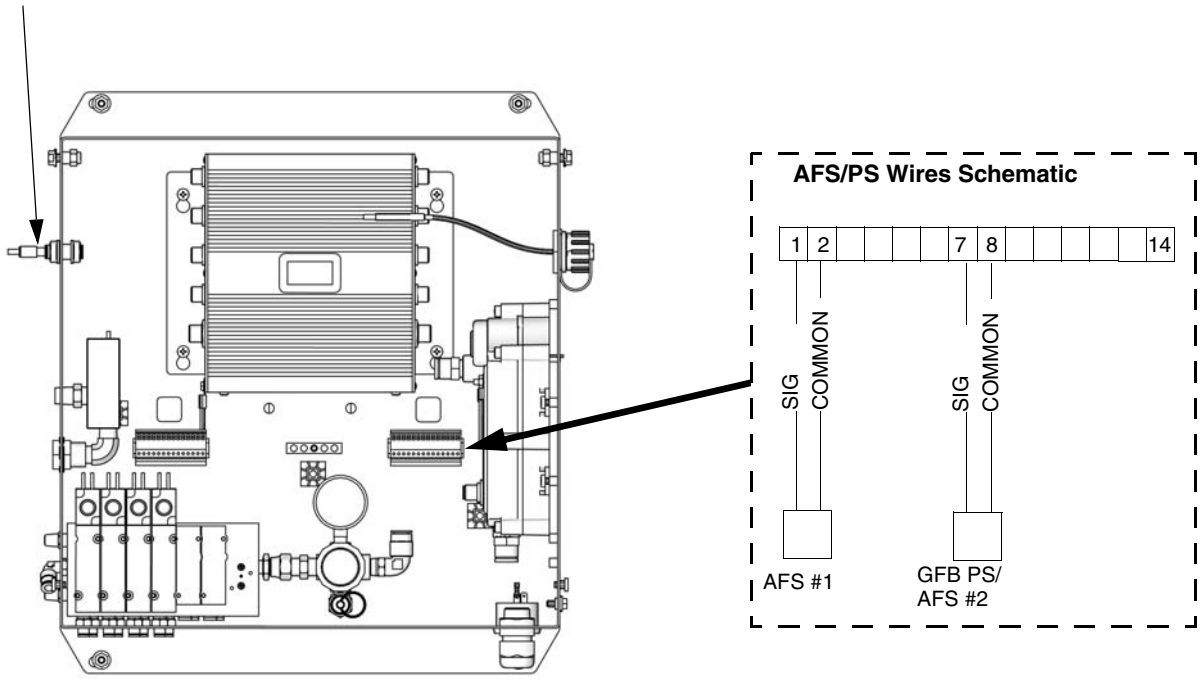
Install GFB Pressure Switch (107) here

Install Air Flow Switch in Control Box



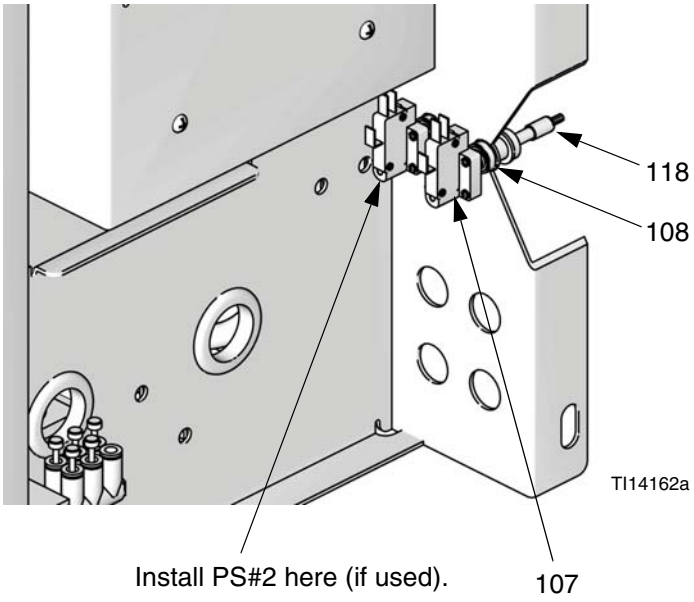
ti15730a

FIG. 4: Installing the Air Flow Switch and Pressure Switch on a ProMix 2KE

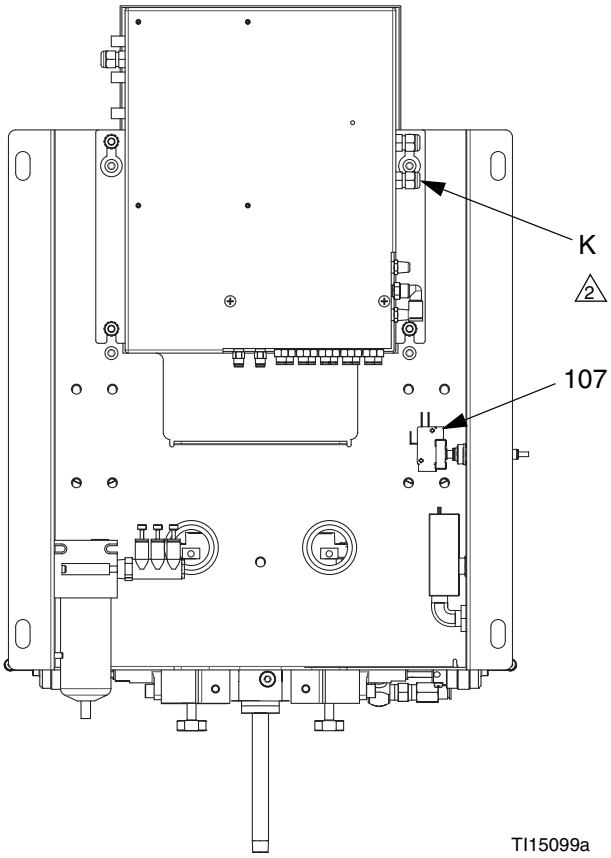
Install the Pressure Switch

NOTE: Each gun flush box includes one pressure switch (PS). Install the pressure switch as shown in FIG. 5 for the ProMix 2KS or FIG. 4 for the ProMix 2KE. If you are using a second gun flush box, install its pressure switch next to the first switch, as shown.

1. Follow **Before Installing**, page 5.
2. Position the pressure switch (107) as shown. Install the bulkhead fitting (108) to secure the switch to the side of the panel. Install the tubing adapter (118) in the bulkhead fitting.
3. Route the pressure switch wires through the designated strain relief (K). Connect PS#1 wires to pins 7 and 8. Connect PS#2 wires (if used) to pins 9 and 10.
4. Connect a 5/32 in. (4 mm) OD air tube from the tube adapter (118) to the **A** port on the bottom of the gun flush box. See FIG. 2 and FIG. 11.



Install Pressure Switch on Back of Fluid Station Panel



Back View of Fluid Station Panel

PS Wire Connections at Fluid Station Control Board

2 Route PS wires through this strain relief (K) to Fluid Station Control Board.

3 Connect PS#1 wires to J1 pins 7 and 8 on Fluid Station Control Board.

4 Connect PS#2 wires to J1 pins 9 and 10 on Fluid Station Control Board.

FIG. 5: Installing the Pressure Switch on a ProMix 2KS

Gun Flush Box Solenoid

NOTE: Each gun flush box includes one solenoid (109). Install the solenoid in the fluid station panel, as shown in FIG. 6. If you are using a second gun flush box, install its solenoid next to the first solenoid, as shown.

1. Follow **Before Installing**, page 5.
2. Install the solenoid valve (109) in the correct position as shown in FIG. 6 for the ProMix 2KS or FIG. 7 for the ProMix 2KE. Secure with the two screws supplied.
3. Connect the GFB#1 solenoid wires as shown in FIG. 6 for the ProMix 2KS or FIG. 7 for the ProMix 2KE. Also see the Electrical Schematic (FIG. 8 or FIG. 9).
4. Remove the plug from the solenoid manifold and install the tube fitting connector (110).

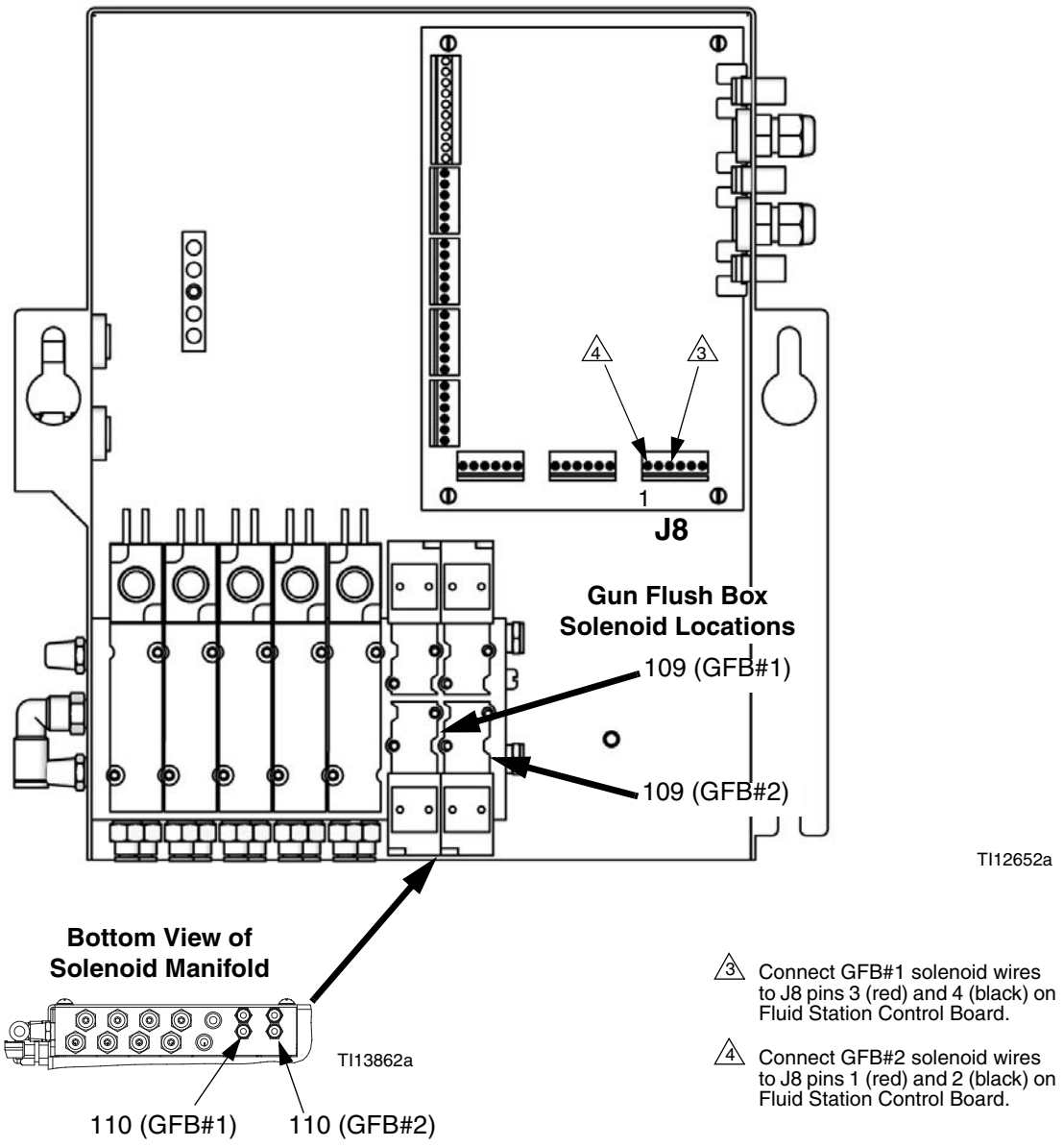


FIG. 6: Installing Gun Flush Box Solenoid Valve on a ProMix 2KS

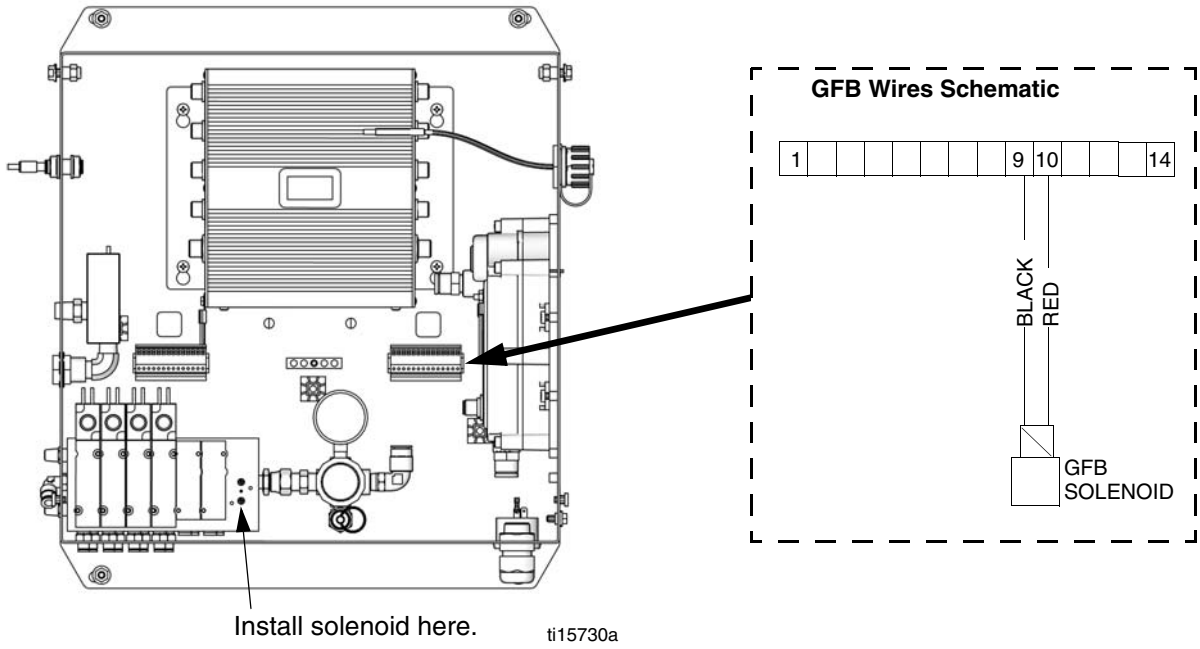


FIG. 7: Installing the Gun Flush Box Solenoid Valve on a ProMix 2KE

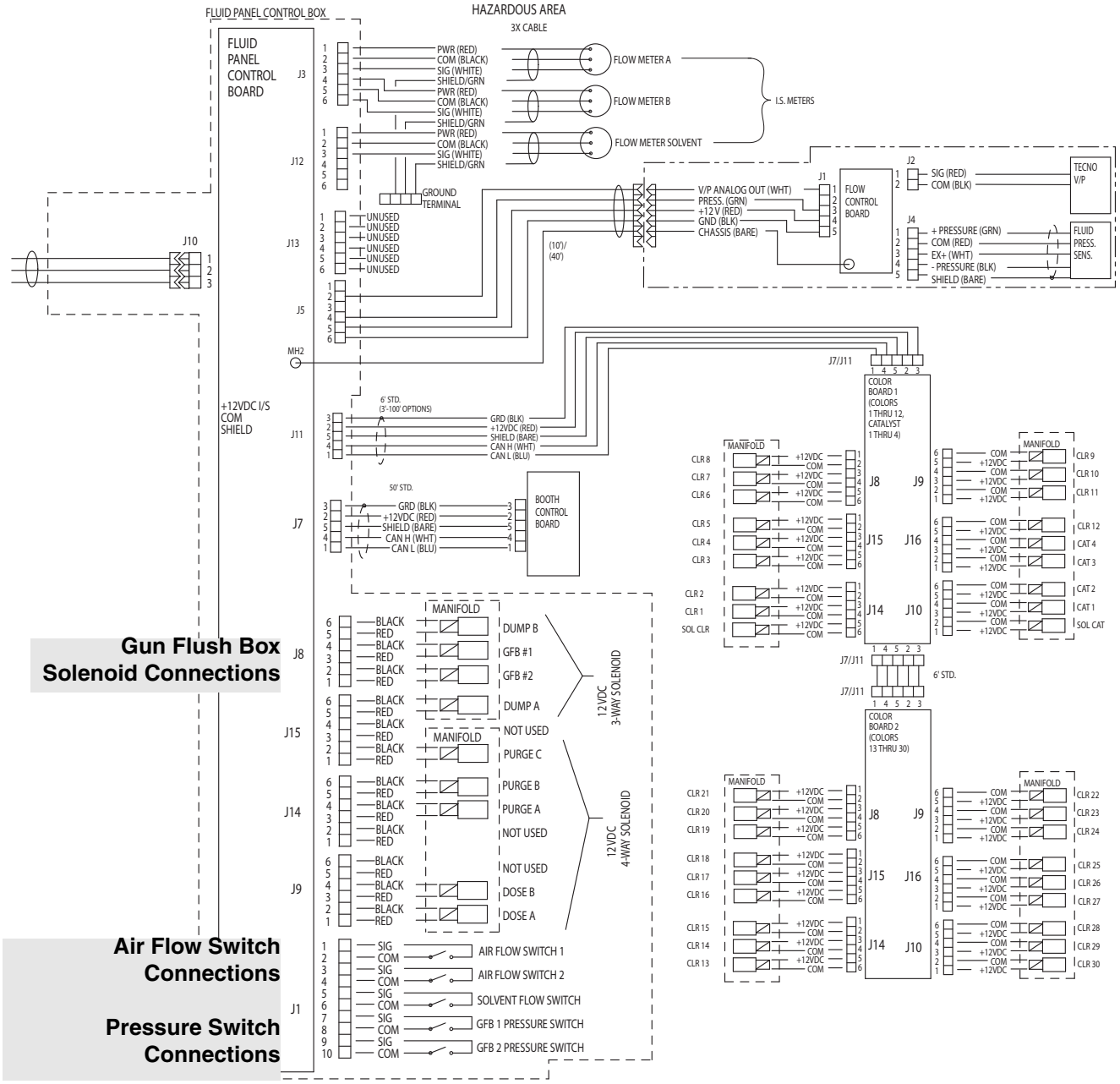


FIG. 8: System Electrical Schematic (ProMix 2KS)

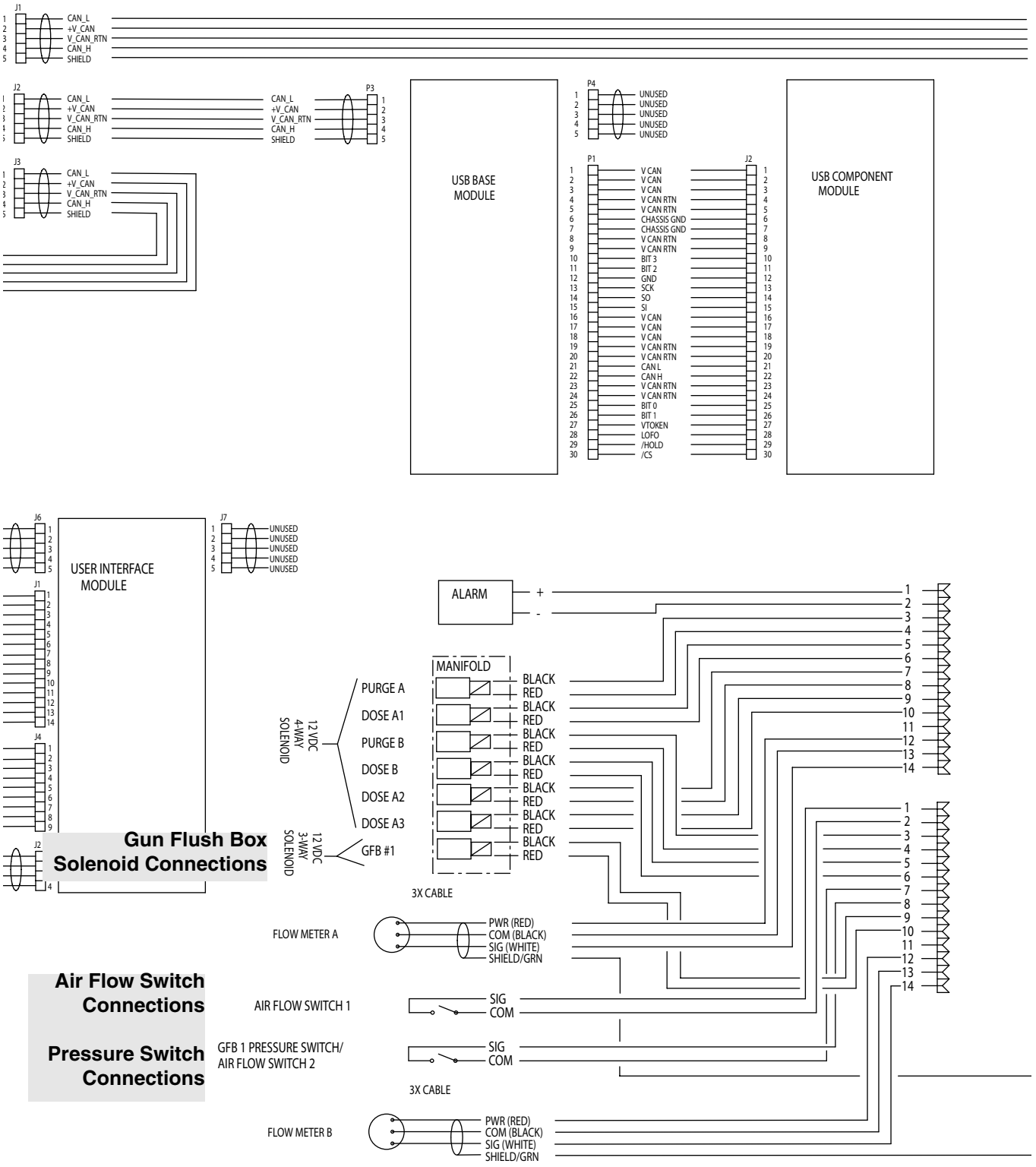


FIG. 9: System Electrical Schematic (ProMix 2KE)

Atomizing Air Safety Shutoff Valve

1. Mount the safety shutoff valve securely.
2. Connect the gun atomizing air from the ProMix 2KS air flow switch to the safety shutoff valve IN port. See FIG. 2 and FIG. 10.
3. Connect an air line from the safety shutoff valve OUT port to the gun air inlet.

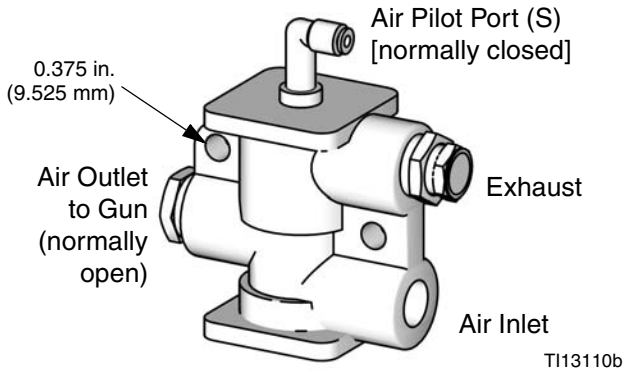


FIG. 10: Air Safety Shutoff Valve

Connect the Air Tubes to the Gun Flush Box

You must connect safety interlock air to prevent atomizing air from turning on during flushing.

The four gun flush box air fittings are labeled as follows. See FIG. 11.

Label	Function
P	Gun flush box supply air input
A	Return air/pressure switch signal
C	Gun trigger cylinders air (activates gun trigger)
S	Safety interlock (locks out atomizing air)

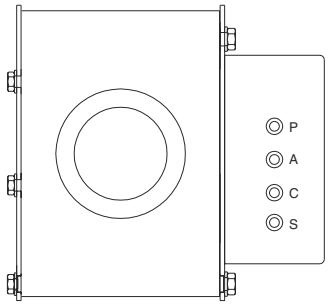


FIG. 11: Gun Flush Box Air Fittings (Bottom View)

NOTE: Use 5/32 in. (4 mm) OD tubing. Connect tubing as follows:

1. From the **P** fitting to the air supply manifold (M, FIG. 12). Use a clean, dry air supply (filtered to 10 microns).
2. From the **A** fitting to the pressure switch air input (PS, FIG. 12).
3. From the **C** fitting to the gun flush box solenoid (GFB, FIG. 12) output.
4. From the **S** fitting to the atomizing air safety shutoff valve pilot port (FIG. 10).

Trigger Height Adjustment

Adjust the trigger height to ensure the gun triggers during purging. See the Gun Flush Box manual 309227.

Operation

Follow the operating instructions in the proportioner Operation manual. See the following chart for a summary of GFB functions.

GFB Lid	Gun in GFB?	Atomizing Air Status
Open	Yes	Locked out by safety shutoff valve
Open	No	Locked out by safety shutoff valve
Closed	Yes	Locked out by safety shutoff valve
Closed	No	Supplied to gun

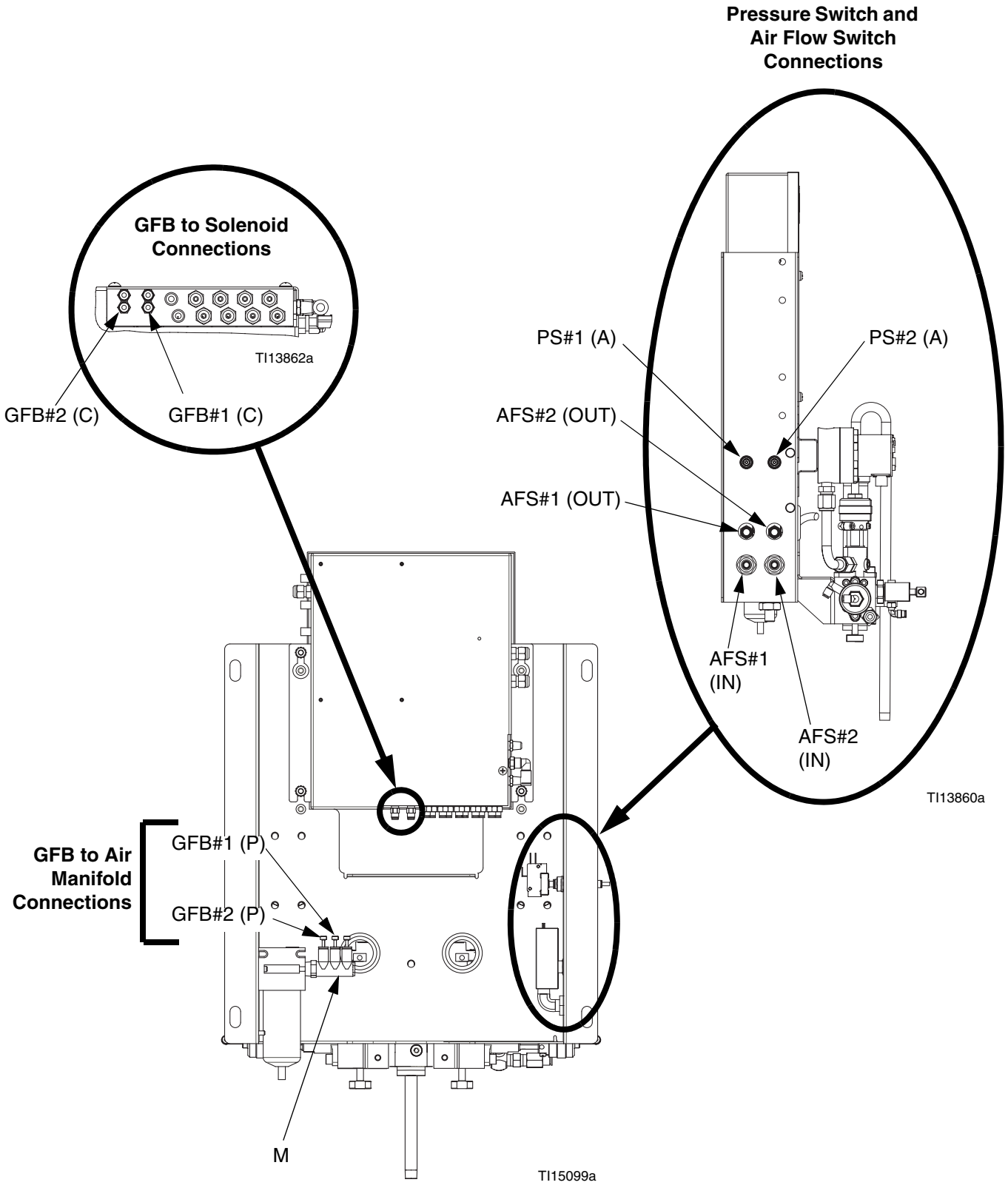


FIG. 12: GFB Solenoid, Air Manifold, Pressure Switch, and Air Flow Switch Connections (ProMix 2KS shown)

Maintenance

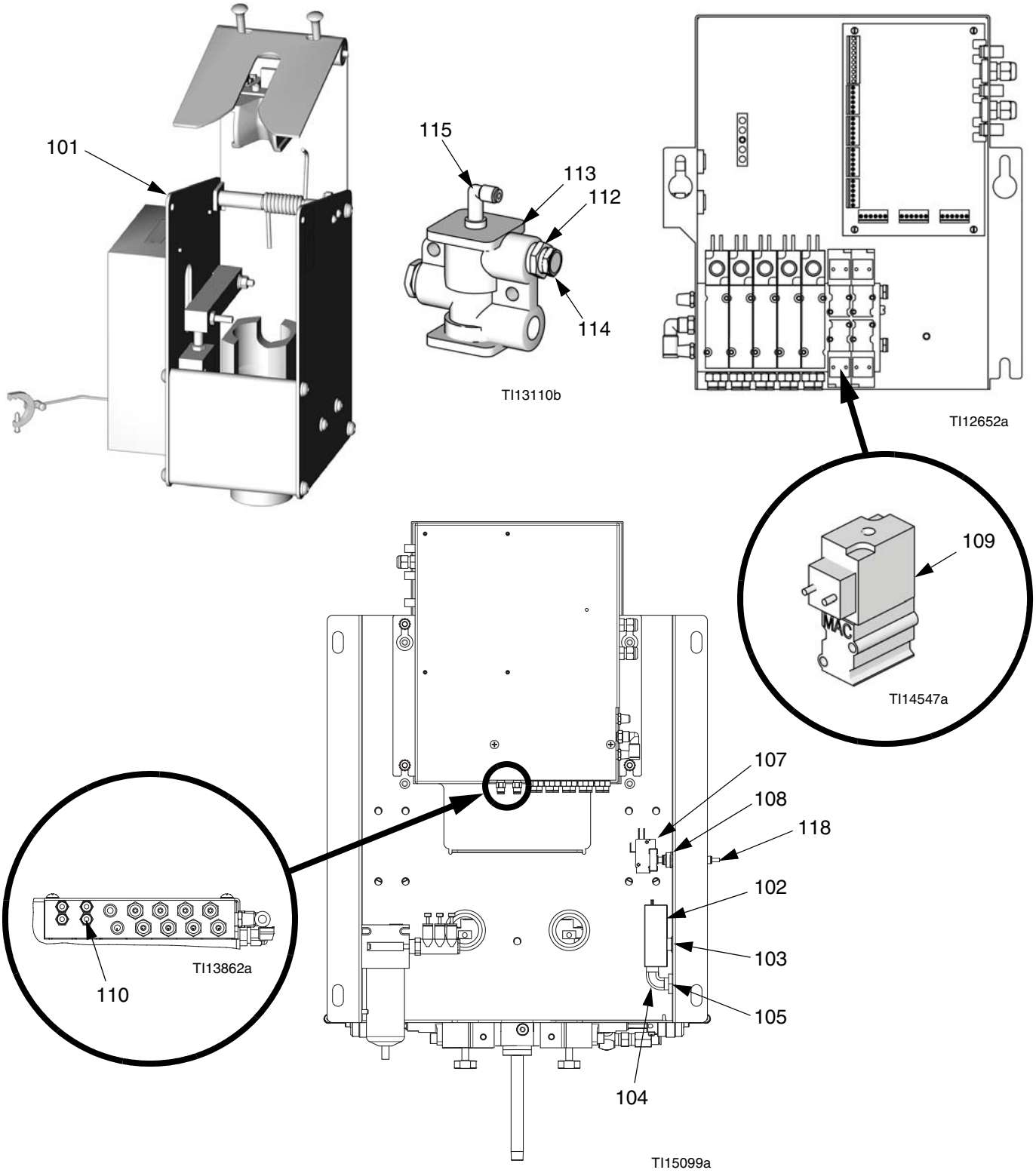
	Daily	Weekly	Every 2 weeks, minimum
Gun Flush Box Enclosure	Clean the inside with a compatible solvent.	Clean the inside and outside with a compatible solvent.	
Door	Clean hinge holes.		Grease hinges.
Cylinders			Pull the cylinder rod forward and coat with grease or petroleum jelly.
Switches			Clean and lubricate.
Fluid Outlet tube		Check for buildup of mix material and replace if restricted.	

Troubleshooting

Problem	Cause	Solution
Gun is in gun flush box, but system will not purge or mix.	Air is shut off.	Turn on system air.
	Gun switch is not activating.	Test switch. Replace if damaged.
	Pressure switch is not working properly.	Check that correct fluid station circuit board input is activating (LED should be lit).
	Tubing is not installed correctly.	Check tubing connections, page 14.
Gun flush box fails to purge after pot life time ends.	Gun is not in gun flush box.	Place gun in gun flush box when it is not in use.
	Gun switch is not activating.	Test switch. Replace if damaged.
Gun trigger is not open when gun flush box controller activates it.	Tubing is not installed correctly.	Check tubing connections, page 14.
	Cylinder is dirty or damaged.	Clean cylinder rod or replace.
	Gun is not properly set in gun holder.	Check to make sure gun holder is not obstructed by buildup.
	Lower cylinder is out of adjustment.	Adjust cylinder block. See **Trigger Height Adjustment,** page 14.
Gun is out of gun flush box with door closed but atomizing air is off.	Lid switch or gun switch failure.	Check switches and replace if necessary.
	No air flow to gun flush box.	Check air supply and tubing.

Parts

Part No. 15V826 Gun Flush Box Kit



Part No. 15V826 Gun Flush Box Kit

Ref. No.	Part No.	Description	Qty.
101	244105	MODULE, gun flush box, see manual 309227	1
102◆	119159	SWITCH, air flow	1
103◆	113029	NIPPLE; 1/4 npt	1
104◆	111763	ELBOW; 1/4 npt (mbe)	1
105◆	104641	FITTING, bulkhead; 3/4-20 unef x 1/4 npt(f)	1
107	121323	SWITCH, pressure	1
108	104176	BULKHEAD; 1/4 in. (6 mm) OD tube x 1/4 in. (6 mm) OD tube	1
109	121324	VALVE, solenoid	1
110	111328	CONNECTOR; 10-32 x 5/32 in. (4 mm) OD tube	1
111	598095	TUBE, air, nylon; 5/32 in. (4 mm) OD; for making air connections; must be ordered in 500 ft (152.5 m) lengths; not shown	1
112‡	100081	BUSHING; 1/2 npt(m) x 3/8 npt(f)	1
113‡	104632	VALVE, piloted	1
114‡	111881	MUFFLER	1
115‡	598140	ELBOW, tube; 1/8 npt(m) x 5/32 in. (4 mm) OD tube	1
118	517312	ADAPTER, tube; 1/4 in. (6 mm) OD tube x 5/32 in. (4 mm) OD tube	2

* *Order length needed.*

◆ *Part of Air Flow Switch Kit 15T632.*

‡ *Part of Atomizing Air Safety Shutoff Kit 15V823.*

Accessories

Gun Holder

Part No.	For Gun
198405	Graco PRO™ Xs3, PRO™ Xs4
198787	Graco PRO™ Xs2
196768	Graco PRO™ 3500, 3500hc, 4500
196769	Graco Delta Spray™ Gun
196770	Graco Alpha Gun
196771	Graco Alpha Plus, Alpha Plus with RAC Tip
196767	Devilbiss JGA/MSA*
15T646	Graco AirPro™ Gun
15G093	Graco G15
15G346	Graco G40 and G40 with RAC Tip

* Brand names or marks are used for identification purposes and are trademarks of their respective owners.

570123 Wall Mount Kit

For mounting the gun flush box to the spray booth wall. Kit mounts only to the right side of the gun flush box.

Technical Data

Maximum Air Inlet Pressure	100 psi (0.7 MPa, 7 bar)
Minimum Air Flow required to activate Air Flow Switch	1 cfm (28.3 lpm, 0.028 m^3/min)
Weight	22 lbs. (9.6 kg)
Height	14 in. (356 mm)
With door open	21 in. (533 mm)
Width	7 in. (178 mm)
Length	11 in. (279 mm)
Outlet	2 in. npt(f)
Wetted Parts	Stainless steel, nylon, ultra high molecular weight polyethylene

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

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Graco Information

For the latest information about Graco products, visit www.graco.com.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.
Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211 **Fax:** 612-378-3505

All written and visual data contained in this document reflects the latest product information available at the time of publication.
Graco reserves the right to make changes at any time without notice.

Original instructions. This manual contains English. MM 312784

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Revised 11/2010